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[54] METHOD FOR MAKING SOLUBLE RICE PROTEIN CONCENTRATE AND THE PRODUCT PRODUCED THEREFROM

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[57]

ABSTRACT

This invention concerns a process for preparing soluble rice protein concentrate with reduced levels of manganese, aluminum, selenium and phytic acid and improved digestibility from rice raw material comprising:

digesting the raw material reduced in particle size to permit efficient enzyme action in an aqueous medium with an alpha-amylase enzyme at an operable pH and temperature for a period of time sufficient to solubilize a substantial portion of the rice starch and form a liquid slurry;

heating the rice starch slurry at 105° C. to 130° C. for 30 to 60 seconds;

separating the high protein rice flour from the rice syrup:

treating a slurry of the high protein rice flour with a protease enzyme at an operable pH and temperature in an amount and for a period of time to solubilize the rice protein:

clarifying the protease treated slurry to provide a soluble rice protein concentrate with reduced manganese, aluminum, selenium and phytic acid and improved digestibility.

The soluble rice protein concentrate contains more the 16% protein on a solids basis, and has on a per gram protein basis, a manganese content of 50 microgram or less, an aluminum content of less than 15 microgram, a selenium content reduces a minimum of 25% relative to rice raw material and a phytic acid content of less than 15 mg, and a protein digestibility of greater than 90%.

22 Claims, 1 Drawing Sheet